MODIS IOT Weekly Report
Mission Operations Days: 2000/023 to 2000/029
January 22, 2000 15:00:00 EST to January 29, 2000 14:59:59 EST

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode
Terra (AM-1) has an anomaly with the propulsion thrusters that is still being worked
MODIS is in Safe Mode
MODIS has no known Anomalies

Blackbody		Off	Nominal
Calibration Electronics		Off	Nominal
Control Processor		B On; A off	Nominal
Door:	Nadir	Unlatched, closed	Nominal
	Space View	Unlatched, closed	Nominal
	Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter		Off	Nominal
FIFO Memory		Off	Nominal
Format Processor		Off	Nominal
PC FPA		Off	Nominal
Power Supply:	1	Off	Nominal
	2	On	Nominal
PV FPAs:	VIS	Off	Nominal
	NIR	Off	Nominal
	SMIR	Off	Nominal
	LWIR	Off	Nominal
Radiative Cooler:			
	Outgas Heaters	Off	Nominal
	LWIR FPA Heater	Off	Nominal
	SMIR FPA Heater	Off	Nominal
Scan Assembly		Off	Nominal
SDSM		Off	Nominal
SRCA		Off	Nominal
Survival Heaters:	PS1	Enabled	Nominal
	PS2	Enabled	Nominal
Timing Generator		A Off, B On	Nominal

Flight Software	Rev BD	Nominal
Inhibit Ids Set	31,32,33,53,58	BB, CE, CP, SDSM, SD
TMONs enabled	None	Nominal

This Week's Completed MODIS Activities:

2000/023	16:32 EST	Turned on CS and IS OG heaters
2000/023	16:35 EST	Turned on OS OG heater
2000/023	16:37 EST	Opened the Space View Door

2000/024	09:18 EST	Turned off the outgas heaters
2000/024	13:58 EST	Transitioned to Science Mode on the B side
2000/024	14:40 EST	Performed PV electronics calibration
2000/024	17:05 EST	Turn on blackbody to 285K to warm for A side electronics
2000/025	11:05 EST	Memory Load test
2000/025	12:10 EST	Memory Dump test
2000/025	10:45 EST	MODIS FPAs started controllling at 83K
2000/026	13:26EST	Commanded to Safe Mode by Spacecraft during burn

This Week's Scheduled MODIS Activities Not Completed:

The following activities were scheduled to occur, however were postponed due to the Solid State Recorder failure and the transition to Safe Mode.

2000/025	Jan 25th, 2000	Turn off PV and PC DC Restore (~12:09 EST)
2000/025	Jan 25th, 2000	Set formatter encoder delta to –3072 (~12:09 EST)
2000/025	Jan 25th, 2000	View SV with EV during two moon in SV events
2000/025	Jan 25th, 2000	Set formatter encoder delta to 0 (~15:13 EST)
2000/025	Jan 25th, 2000	Turn on PV and PC DC Restore (~15:13 EST)
2000/025	Jan 25th, 2000	Open SDD to Screened and then close SDD (~16:43 EST)
2000/025	Jan 25th, 2000	Open SDD to Open and then close SDD (~18:40 EST)
2000/026	Jan 26th, 2000	Turn off MODIS
2000/026	Jan 26th, 2000	Turn on MODIS on the A side
2000/026	Jan 26th, 2000	Transittion to Science Mode on the A side
2000/026	Jan 26th, 2000	Set Blackbody duty cycle to FULL
2000/026	Jan 26th, 2000	Perform PV and PC electronics calibrations (ATC)
2000/026	Jan 26th, 2000	Perform SDSM calibrations w/ SD Open and Screened Utilizes expedited data.
2000/026	Jan 26th, 2000	Perform BB calibration to 315K (ATC)

Upcoming MODIS Events:

MODIS will recover from Safe Mode once the MODIS team is comfortable that the instrument won't be back in Safe Mode in the near future. The schedule for this transition will be discussed once several orbit attainment burns have been successfully completed.

MODIS Anomalies:

Many transient red and yellow alarms were triggered during the transition to science mode. The limit violation which took the longest to clear was for MOD_TA_PV_SM_PWB5_11. This temperature sensor is noticably colder (~4 to 12K) than the other 5 SAM MUX temperatures.

Also during the transition to Science Mode, the command and data handling people received two errors related to MODIS; SFE data overflow errors and taxi errors. In addition, EDOS noticed 89 time jumps in the science data. Both the SFE and time jump errors lasted until approximately 10 minutes after the science mode transition procedure had completed.

General Instrument Comments:

MODIS is currently in Safe Mode with all three doors closed and unlatched. The timing generator is powered on the B side due to the transition to Safe Mode from Science Mode.

MODIS "science data" was transmitted to ground based antennas via the X-band transponder. This science data is not "real" because the MODIS formatter is not powered on and the nadir aperture door is closed.

The load and dump of a sample macro 31 table were successful. In addition, a dump of table 18 (most recent door position trigger values) was dumped to verify the number of steps the space view door moved during the open and close processes.

MODIS Telemetry Trends:

MODIS focal planes started controlling at 83K approximately 45 hours after the transition to Science Mode.

Non-MODIS Significant Events:

2000/025: An SSR failure prevented further capture of MODIS science data. No further data was collected prior to transition to Safe Mode. Approximately 6 hours of the 9 hours of science data produced before the SSR anomaly occurred were captured and distributed to the GDAAC.

2000/026: Spacecraft and instruments sent to Safe Mode due to anomaly during 1.024 second burn.

Analysis and discussion of the thruster data continues. The burn schedule continues to be in a state of flux.

Limited Life Item Status:

The Space View Door was closed. All limited life items are well within lifetime ranges, although precise statistics for each item are still pending.